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## A NEW THEORY OF PRICES.

AS was to be expected, the violent agitation of the money question in the field of politics during the last ten years has resulted in efforts to recast the old theory of money. During the campaign of 1896, it was a notable fact that the advocates of the free coinage of silver were able to quote the authorities more frequently — although not always pertinently — than the advocates of the gold standard. In support of their contention, the friends of silver relied upon what is commonly known as the “quantity theory” of money, and were able to use on their side such distinguished names as Adam Smith, David Ricardo and John Stuart Mill. It is not surprising, therefore, that the first books to be published since that campaign, which make any pretence to a scientific treatment of the money question, should come from men who are anxious to place the gold standard on a solid foundation; nor that their books should be controversial in character. But it is a little surprising that two professors of political economy were so impressed by the silver arguments that they should deem it necessary to invent a new theory of money in order that the advocates of bad money may hereafter have no ground to stand upon. That is what Professors Laughlin and Scott have done, each in his own way, and it is my purpose in this article, less to review their books,<sup>1</sup> than to determine if possible whether or not they prove that the classical theory of money should be cast aside.

Professor Laughlin's work is the first of a series of six volumes which the author is hoping some day to complete. This first volume discusses the nature of money and credit, and has for its purpose the establishing of what Professor Laughlin calls “the true theory of prices.” For some reason, Professor Laughlin disposes of the “quantity theory,” to which more than one

<sup>1</sup> *The Principles of Money.* By J. Laurence Laughlin. New York, Charles Scribner's Sons. — XVI, 550 pp.

*Money and Banking.* By William A. Scott. New York, Henry Holt and Co., 1903. — 8, 381 pp.

hundred pages are devoted, before he states his own theory. As this does not seem to me a logical order, I shall first examine the theory which he propounds and then consider his criticism of the "quantity theory."

According to Professor Laughlin, the first use of money was as a standard, and this is still its primary and most important function. Some article having value because it is in general demand is chosen by a people as a standard of value. It may or may not serve as a medium of exchange. Price is the amount of the standard commodity for which a thing will exchange; it depends upon the value of the thing and the value of the standard. It is the result of an evaluation process, and cannot evolve until the values of both the standard and the thing itself have been determined. After a people have arrived at the value of the standard, it is an easy matter to fix the prices of goods, for all that is necessary is to compare the value of a particular good with the value of the standard. It follows necessarily that price is in no sense dependent upon the quantity of the media of exchange; on the contrary, the quantity of the media of exchange is determined by price; that is to say, by the value of the standard, increasing as the latter falls and decreasing as it rises. The quantity of money in circulation, therefore, is a result, not a cause, of the level of prices.

Applying this theory to existing conditions, Professor Laughlin claims that gold has a "world value." This value results from a demand that is twofold — monetary and non-monetary. He holds that the monetary demand is very slight, and that it might be reduced almost to zero if only proper use were made of credit.

According to Professor Laughlin, credit is a coinage of property into a means of payment. It supplies a most useful medium of exchange, but is in no sense a standard of prices and has no effect upon prices. It could affect prices only by affecting the value of gold, the standard. Under present conditions, to be sure, banking reserves are regarded as necessary as a basis for credit operations, and a certain amount of gold is needed for this purpose. It might appear, therefore, that the use of credit

increased the demand for gold, and so tended to cause its value to rise; but the increase in the demand for gold from this cause is so slight as to deserve no attention. Indeed, if men had a proper idea of credit and saw clearly that it was based upon property, being a means of exchanging goods against goods without the intervention of the standard, the necessity for banking reserves would almost entirely disappear; for normal credit rests upon and is secured by property, not money. The notion that credit is a purchasing power like money, causing prices to rise, is a fallacy. Credit is born of business transactions, it is not the cause of them; and the quantity of credit media of exchange varies with perfect elasticity with the volume of business transactions. The demand for goods comes from goods, and credit is merely a device for expediting exchanges. It does not increase the demand for goods in general, for that is fixed, not by the amount of money or credit in use, but by the amount of goods in existence which men are willing to exchange. Since credit cannot increase the demand for goods, and has no appreciable effect upon the demand for money, it follows that it can have no effect upon the prices of goods. These are determined by the value of the standard, and can be changed only as that changes.

It is a remarkable thing about Professor Laughlin's *Principles of Money* that the work contains in fact no theory of money. He puts forth a theory with regard to the value of gold, and it is sound enough, to wit, that the value of gold depends upon demand and supply, conforming in the long run to the cost or expenses of production. But of money there is no theory. Indeed, he does not define money, but expressly declines the task in order to avoid "hair-splitting dialectics." What is commonly called money, he says, subserves one or more of these three functions: a common denominator or standard, a medium of exchange, a standard of deferred payments. He quite properly points out that the alleged service of money as a store of value is not a function peculiar to money, differentiating it from other things. But what is money? Why has money value, and what may cause changes in its value? To these questions, which a theory of money must answer, Professor Laughlin replies that gold is the

standard, and that men by a mysterious process of antecedent evaluation make the prices of goods conform to the value of gold. If this answer is correct, then the money question is simplicity itself; in fact, there is no money question. All the problems that have given rise to the pyramidal mass of money literature instantly disappear. There is a standard of price, and there are various media of exchange, but there is no such thing as money.

Of the several fundamental errors in Professor Laughlin's book, the one that seems to me nearest the base of things is his notion about the evaluation of gold which is antecedent to the determination of price. Let Professor Laughlin explain his theory. On pages 361 and 362 he says:

The difference between what I have ventured to call the true theory of prices and the quantity theory is very clear. The point at issue is partly one of time; since it has seemed to me that in the order of events the evaluation process between goods and the money metal takes place before the comparison could be instituted between the media of exchange (or amount of money in circulation) and the mass of transactions, — as is required by the quantity theory. On the one hand, I have not omitted to state the influence of an increased supply of (or lowered cost of acquiring) gold on its value; but the quantity of gold has, in my opinion, affected prices only through its influence on the value of the standard of prices, and not through its actual presentation as a medium of exchange against goods. The difference in theory, then, centres about the time and manner of the evaluation process between goods and gold. In my exposition, the evaluation goes on antecedent to the exchange operation, since the exchange cannot, philosophically or practically, take place until the rate of exchange has been settled; therefore the amount of the media of exchange offered for the goods must, of course, equal the figure set upon the goods exchanged. The quantity of the media of exchange is a result, not a cause, of the evaluation between gold and goods, and therefore cannot have been the means of fixing prices.

Let us see where the acceptance of this "theory" of antecedent evaluation leads us. If the value of gold must be fixed and determined before money exchanges are possible, then so must the value of wheat be fixed before any exchanges of wheat are pos-

sible; and so on through the entire list of commodities. Value, or the exchange relation of goods, — and this is the definition accepted by Professor Laughlin, — is something fixed antecedently to all exchanges, and is not, as has been commonly taught by economists, the outcome of the clash of demand and supply, or of marginal utility as revealed in the higgling of markets. Professor Laughlin admits that the value of gold, like the values of other commodities, is determined by demand and supply (see page 337), yet these forces cannot possibly act unless men who want to buy and men who want to sell meet in the same market; and the value of any particular good, whether gold or wheat, is the result of their meeting and competitive bidding. What is the nature of that mysterious “evaluation process” whereby the value of gold is fixed before men meet for the exchange of goods against gold? That is something, it seems to me, which Professor Laughlin ought to explain and illustrate very clearly, for his whole “theory” of prices hinges upon it; but apparently it is so clear in his own mind that it needs but to be stated to be seen to be true. On pages 339 and 340 he gives what is probably intended for a concrete illustration, but it does not illustrate. He says:

A large new supply of gold, either in the form of bars or coin, would probably appear first at the counters of public or private banks; the banks would retain only that amount which was needed for reserves by the existing conditions of business. These institutions, or owners of bullion, would have two destinations for the surplus gold not needed for reserves: (1) the circulation (as a medium of exchange), or (2) the arts. (1) If the country already had media of exchange other than gold — such as bank notes, deposit currency, and the like — sufficient to carry on existing transactions, then the injection of the new gold into the channels of trade as a medium of exchange would be resisted by the business habits of the community. If put into circulation, it would not stay there, — any more than did our surplus silver dollar pieces. Hence the surplus gold could not affect prices by being directly offered against goods as a medium of exchange, because it would not necessarily appear in that form. (2) On the other hand, if no more gold were needed in the reserves and the media of exchange, and if it finally went into the arts, the increased supply must there adjust itself to the existing demand in exactly the same way as would

that of any other commodity. Gold articles (omitting the labor impressed upon them) would fall relatively to wheat and other goods. Plate formerly priced at fifty dollars, or fifty bushels of wheat, would, for instance, now exchange for only forty bushels of wheat (and the plate would be paid for by a check on a deposit account based on wheat thus coined into means of payment). But if gold plate falls relatively to wheat, so would gold as a standard of prices; since, under free coinage, nothing bars the presentation of plate and bullion to the mint, or the melting up of coins to go into the arts. The plate could have been coined — in round numbers — into fifty gold dollars; so that wheat, owing to the fall in the relative value of gold, would now be priced at a rise of twenty-five per cent. Obviously, such operations are not followed instantly by their results; since some time is needed for the effects to be worked out. It is not at all necessary to appeal to a later step, such as the actual increase of the supply of the media of exchange as compared with transactions, before we can ascertain a fall in the value of gold, as seems to be required by the quantity theory. And yet due importance has been given in our demonstration above to the operation of the law of demand and supply on the value of gold, which is the more influential because the direct effect of expenses of production is masked by the durability of gold.

It is hard to treat this paragraph respectfully or seriously, yet it contains the whole of Professor Laughlin's theory, and is, therefore, worthy of careful analysis. The supposition is that a large new supply of gold has been brought into the country. This new gold, as Professor Laughlin says, would probably go first into the vaults of banks. Then what happens to it? According to Professor Laughlin, *if it is not needed in the reserves, or if the country already has all the media of exchange it needs*, the new gold will go into the arts and adjust itself to the existing demand just as would any other commodity; gold plate falls in value on account of the increased supply of gold, the prices of goods in general are raised because the value of the standard has fallen, and then the volume of the medium of exchange is increased. That looks clear, but it is not. First, if the new gold is rejected by bankers on the ground that it is not needed in the reserves or as a medium of exchange, why should it not equally be "surplus" in the arts and be rejected by manufacturers on the ground that "under existing conditions" they have

no need for it? Second, how do bankers, or other owners of the new gold coin, persuade manufacturers to buy it? Third, when a banker has sold his gold, has he less cash than before, or is he still burdened with the same surplus? Fourth, granting that the new gold gets into the bullion market, *why* does it fall in value? No owner will be insane enough to offer it at less than \$20.67 per ounce fine, the sum which the government will give for it; and since the prices of goods in general have not yet risen (for Professor Laughlin will not let them rise until the value of the standard has fallen), the relation of goods to gold is the same as it was before the new gold appeared, so that manufacturers employing it in the arts are under no inducement to increase their purchases of gold. Fifth, does Professor Laughlin mean to class this new gold, if coined and put into circulation, with the silver dollars coined under the Bland-Allison Act? If not, he is misleading the unwary reader. Furthermore, does he mean to imply that the new silver dollars were "rejected"? Then, why did the circulation absorb their representatives, the silver certificates? Sixth, are "existing conditions of business" so rigid and iron-clad that bankers with new gold to serve as a basis for credit cannot change them? Cannot bankers by lowering the rate of discount a trifle tempt business men to borrow more and enlarge their operations?

The paragraph quoted suggests several other questions, but the foregoing suffice to show that Professor Laughlin's new theory not only explains nothing, but has no logical relation with the facts of the business world. It is essentially bad and unsound in two respects:

First, the theory assumes that the business world is a static organism, with needs fixed and "existing conditions" immutable. Throughout this book one runs against the tacit assumption that the demand for any particular good is fixed and definite, and that a "surplus" arises when the supply exceeds this demand. With regard to money the assumption becomes positive and express; a certain amount of money (the standard) is needed to serve as a medium of exchange, and a certain amount to serve as banking reserves; the "surplus" is rejected. This statement would be true within limits if the phrase "amount of money-



value" were substituted for "amount of money." The supply of money pieces, which is the thing meant by the expression "supply of money," is quite different from the supply of money value, or value in the form of money. At any given time a country needs a certain amount of value in a form readily exchangeable, and the substance to which men's wants give that kind of value is known as money. Changes in the quantity of that substance must affect the value of each unit, but cannot affect the value of the whole supply unless the economic activities of men are stimulated or depressed by the alteration in the value of the money unit. A large new supply of gold added to the existing stock would undoubtedly first be deposited in the banks. To the bankers it would seem a real increase in their lending power, and practically it would be such. Any banker knows what would happen next. Country bankers would look for worthy borrowers in their own fields and would make slight concessions in the rate of discount and in other ways, in order to enlarge their operations at home, and if unsuccessful, would send their "surplus reserve" to a city "correspondent" bank, receiving interest at one and a half or two per cent. The city banks would lower the call-loan rate in order to give the new money immediate employment, and we should have increased speculative buying on the stock and produce exchanges, with an upward tilt of prices.<sup>1</sup> The next step in the process of readjustment will be a rise in the prices of certain important commodities, especially those subject to what may be called a world demand. Bankers are the last people in the world to view with complacence hoards of idle money. The discount rates of the New York banks and of the great banks of Europe will be lowered and men will be tempted by this reduction in the expenses of production to enlarge their undertakings. The loans of banks will increase, and as a result

<sup>1</sup> This is what happened during the dull years of 1894 and 1895, when the country's supply of cash, as a result of mining operations and of the deficit in the national revenues, was being increased at the rate of some ten millions a month. The natural consequence of the speculative spurts of prices in those two years was a large exportation of gold, and this would happen in the case supposed by Professor Laughlin unless we assume that a "large new supply of gold" has been added to the world's stock as well as to our own.

there will be livelier bidding for raw materials, and in consequence, first in one field, then in another and another, a rise of prices. Whether this process of readjustment shall begin early or late, and move rapidly or slowly, depends on the economic and industrial conditions of the time. If these are such that confidence in the future of trade and industry is growing, credit will be more liberally extended and prices will rise more quickly and to greater heights than if the new gold should come at a time when, because of war or recent industrial disaster, bankers were unusually conservative and *entrepreneurs* timid and depressed. But come it must, sooner or later, for the men who have the gold can get no profit out of it except either by getting rid of it or by using it as a basis for loans, *and in either case it must be used as money*. Professor Laughlin's contention that it will go into the bullion market and be sold to manufacturers is so absurd that I fear I do not understand him. Granting that the industrial or art demand for gold will increase as its value falls (although that assumption may be doubted), in order to save Professor Laughlin's theory manufacturers must be accommodating enough to increase their purchases of gold *before* its value has fallen, *i.e.*, before general prices have risen. After the prices of wheat and other articles have risen, since men are getting more money (gold or its equivalent), and since the prices of gold rings and chains, except as affected by the increased money wages of labor, have not risen, it is conceivable that the consumption of gold in the arts might increase; for not until after general prices have risen without a corresponding rise in articles made out of gold, have people any means of knowing that the value of gold has fallen.

The second essential defect of Professor Laughlin's theory is the assumption that people ever form any estimate of the value of gold, whether consciously or unconsciously, except by and through the purchase and sale of goods. The standard of prices is the one thing concerning the value of which people never speculate. In fact, they unconsciously assume that its value never changes. In this country and Europe no business man ever gives a moment's thought to the value of gold; different men are interested in the prices of different commodities and are concerned about probable changes in the future, but none of them is con-

cerned about the present or future value of gold. The value of gold is not a matter of the slightest conscious concern even to dealers in bullion, or to dentists or jewellers or any other artisans or tradesmen to whom it is raw material or stock in trade. They pay the same "price" for it the year round. That "price" is fixed by law. Why should they worry about the value of gold? Who are the men, then, that accomplish that remarkable evaluation of goods to gold before prices are fixed? Where do they do it, and why, and how? If Professor Laughlin cannot answer these questions, he must admit that his new theory of prices is altogether in the air.

Now as to Professor Laughlin's theory of credit. It also is new, like his theory of money, and quite as unsound. I have already stated that Professor Laughlin defines credit as "the coinage of property into means of payment expressed in terms of money." In a work of fiction no fault could be found with that definition. It is metaphorical and graphic. But as a scientific definition it is loose, inexact, incomplete and untrue. Credit is an executory contract to deliver money, and is accepted as a means of payment because the acceptor believes the maker will be able and willing to deliver the money if called on to do so. Sometimes the acceptor's belief is founded on the fact that the maker of the contract has property, sometimes on the moral certainty that he will acquire property and dispose of it at a profit, and frequently on the maker's mere reputation for good character and business ability. If credit is coined anything, it is coined confidence. Credit is a contract to deliver money at a future time, just as a short sale of wheat is a contract to deliver wheat at a future date. Shall we, then, call a short sale of wheat a "coinage of property into a means of speculation expressed in terms of wheat"?

This new theory of credit, with the conclusion that credit cannot raise prices, is the logical partner of the author's new theory of money. Its fundamental defect, apart from the notion that credit is based on property, is the assumption that the demand for goods which comes from goods and which is the origin of their value, is identical with that demand for goods which is the origin of their price, so that the latter cannot change without a

corresponding change in the former. No economist will deny that the demand for a good does come from other goods, or that in the last analysis all exchange is barter, a swapping of goods for goods. But in order to reach that last analysis we must travel over a rather long and circuitous route, paying very close attention to guideposts. Professor Laughlin's argument is this: Credit cannot affect prices, for it does not affect the demand for the standard or the demand for commodities, the demand for commodities being commodities, the supply of which does not vary with variations in the use of checks, drafts and bills of exchange. If banks extend more credit, Professor Laughlin would say, it is because more goods are being exchanged and there is a need for a larger quantity of the media of exchange; to say that an extension of bank credit will increase the demand for goods is to get the cart before the horse. Here we have a palpable confusion of the forces which make value with those which make price. An extension of bank credits, whether because of growing confidence in the business outlook or because of a new supply of gold, would not affect the values of goods in the long run. I say in the long run, for during the period of readjustment, since all prices would not rise at once, some commodities would temporarily have a greater exchange value than before. In the case of some articles, the prices of which are fixed by custom, generations might elapse before an adjustment to the higher prices of other things would be reached. But we may ignore these exceptions and qualifications and admit that the values of goods would not be affected. The general demand for goods would also not be affected. That is something which comes from goods, and in the case of any particular good is measured by the amount of other goods for which it can be exchanged. There would be only one good which was being offered in exchange in greater abundance than before, and that good would be money, or gold. The fact that it was being offered not as "spot gold" but in the form of "gold futures" (*i.e.* credit), would not make any difference; men with goods to sell would find more buyers in the market, more money ("spot" and "future") seeking their goods, and prices would inevitably rise; that is to say, the value of gold would fall. To the average man it would appear that the

demand for goods had increased, for the money demand for goods is the only demand he knows, and it is the demand upon which his profits (a money item) depend. But the demand for goods upon which their value depends would not have increased. That demand is measured by the quantity of goods in general offered for an article. After the readjustment of prices had been effected, the exchange relations between the goods (changes actually affecting their values being left out of consideration, such as altered costs, new demands, increased supplies, *etc.*) would be the same as before. More money would be offered for goods, but since the value of money had fallen, this increase in the money demand for goods would represent no increase in the demand from goods. Thus when Professor Laughlin claims that credit cannot affect prices, on the ground that it cannot increase the demand for goods, he confounds value with price and fails to establish his proposition.

It hardly seems worth while to take space to show the fallacy of his contention that credit is based on property. I will merely call attention to the fact that the same piece of property on the same day frequently becomes the "basis" for several different credit-instruments, as shown clearly by Henry Thornton in a passage quoted by Mill.<sup>1</sup> Credit is based on neither property nor money, but on confidence, which is the product of a mental operation. Professor Laughlin is compelled to admit that credit does raise prices during a period of wild speculation or overtrading, but at such times, he says, credit is "abnormal" and is issued in excess of the value of the property it represents. In this explanation of abnormal credit we have again a confusion of prices with values. During a period of speculation it is prices, not values, which are inflated. At such a time optimism prevails, men believe prices will rise higher and are eager to buy goods, or to sell property they have in order that they may buy something they think more likely to rise in price; and all are unusually willing to accept credit, or money futures, in exchange for what they sell. If this speculation is carried so far that the outstanding contracts to deliver money cannot be fulfilled, or be offset by other contracts, the more conservative business men

<sup>1</sup> Political Economy, Book III, chap. xi, p. 4.

having begun to lose confidence in the outlook and to cease to buy, then it is discovered that money has been "oversold" and panic ensues, money suddenly becoming the most important, the most sought-for commodity in the market. In precisely the same way wheat or any other commodity may be oversold on the floor of a produce exchange: for a time every one appears to have wheat to sell, and its price (and its value) falls; but if the bears overestimate their power to get wheat for delivery, a panic ensues, and wheat suddenly becomes the most important and most sought-for commodity in the market. The word "abnormal" cannot properly be applied to the short sales of wheat which precede the failure of a "bear" syndicate on the produce exchange, or to the short sales of money, or credit contracts, made by an unsuccessful speculator in real estate just before a crash. The boomer of property, scattering promissory notes, is a "bear" on gold; if his credit proves bad and causes loss to others, it is because he has, either wilfully or ignorantly, overestimated his ability to get money. According to Professor Laughlin, all credit is "abnormal" in so far as it exceeds the sum for which property can be sold. Evidently, then, a failure of the crops this year might by causing a slump in general prices render abnormal a large part of the existing credit in the United States. The distinction between "normal" and "abnormal" credit cannot be made until after the credit has ceased to exist; the one being credit that is redeemed, the other credit that is not redeemed. Such a distinction is worthless, for it throws no light on the conditions which make for security in credit operations.

In his criticism of the "quantity theory" Professor Laughlin gives abundant evidence that he does not understand it. The theory which he combats is a crazy-quilt affair made up of incongruous pieces taken from the expositions of a dozen different writers. I shall confine myself to a few sample "criticisms," and I shall pick those upon which the author lays most stress.

John Stuart Mill in his *Political Economy* presents a good elementary exposition of the demand-and-supply theory of money. It is open to criticism in some details, but if a reader is anxious to find out what Mill really meant and is willing to think a little,

he will get from the book a sound theory in the main of both money and credit. It is to be regretted, of course, that Mill's first two chapters<sup>1</sup> on the subject, in which he considers the nature and value of money in a hypothetical state of society, credit not being used in any form, are so written as to give the unwary reader the impression that he is getting the whole of the discussion. In the subsequent chapters on Credit, Inconvertible Paper Money, Influence of Currency on the Exchanges and on Foreign Trade, Rate of Interest, and the Regulation of Convertible Paper Currency, the reader will find a wonderfully clear exposition of the laws governing the use of money and credit in the world as it exists to-day. Mill is not exact in his description of the demand for money, which he says "consists of all the goods offered for sale." "Every seller of goods," says Mill, "is a buyer of money, and the goods he brings with him constitute his demand." As a general proposition, under the hypothetical conditions assumed by Mill, this explanation of the demand for money is correct enough; but it requires analysis to prevent misunderstanding, and Mill did not stop to analyze it. Only in a general way, even in a state of society where credit is not used, would the goods offered for sale constitute the real or effective demand for money. The mass of goods under such conditions might be called a potential demand for money, but only those goods which had found buyers willing to take them at prices satisfactory to the owners could be said to be the real demand for money. This fact was perfectly clear in Mill's mind, as is shown by his treatment of the subject later on; but it did not occur to him, apparently, as worth while to make the analysis in his introductory chapters. Mill is also to be criticised for calling credit a "substitute for money." His own exposition shows that it is in no sense a substitute for money, but merely a device for increasing the efficiency of money as a medium of exchange, and so lessening the need for money. A promise to pay money in the future has become, under modern conditions, quite as useful and effective a medium of exchange as money in hand; hence credit, as a medium of exchange, may fairly be called a substitute for money: but the expression is to be avoided, since it is apt to give people

<sup>1</sup> Book III, chaps. vii and viii.

the impression that credit is a distinct entity differing from money and independent of it.

Let us consider Professor Laughlin's criticism of Mill. He begins by declaring that Mill did not distinguish between the uses of money as a standard and as a medium of exchange. This is inaccurate. Mill shows clearly that one of the functions of money is to serve as a convenient "measure of value."<sup>1</sup> He did not, however, share Professor Laughlin's belief that some commodity was first selected as a measure of value and then finally adopted for use as a medium of exchange. Professor Laughlin then quotes from Chapter VIII, in which Mill points out that the supply of goods offered for sale is a demand for money. He discovers a fundamental error, to wit, that Mill was confused as to the demand for and supply of gold, which may be both non-monetary and monetary. Professor Laughlin fails to see that Mill was writing about money *per se*, treating it as a separate and independent commodity, as it must be treated if we are to have any theory of money. Even more unfair to Mill is the next remark: "It is possible that the standard metal may scarcely be used at all as a medium of exchange, as in England and the United States to-day." Does Professor Laughlin forget Mill's express declaration that the propositions laid down in that chapter required much modification before they were applicable in countries where credit was used?

He then quotes the following sentence from Mill:

The whole of the goods being in any case exchanged for the whole of the money which comes into the market to be laid out, they will sell for less or more of it, exactly according as less or more is brought.

He calls this an identical proposition, and declares: "This is as much as to say that this quantity of money is required because this is the quantity required: a bucket is full of water, because the water fills the bucket." Professor Laughlin here again fails to perceive that Mill is writing about money *per se* and not about gold or any other commodity which has other than monetary uses. Mill's statement is perfectly true. The only utility which money possesses is its exchangeability. Men who have it can

<sup>1</sup> Political Economy, Book III, chap. xv, p. 1.



utilize it only by getting rid of it. In no other way can they get satisfaction or profit out of it. That fact is fundamental in the theory of money, and is not to be disposed of as a mere identical proposition. Most of Professor Laughlin's criticism of Mill is vitiated by his persistent assumption that Mill, when writing about money, is writing about gold as used at the present time. Mill shows clearly enough in his chapter on *The Value of Money as Dependent on Cost of Production* that gold is subject to a twofold demand, monetary and non-monetary; but the reader of Professor Laughlin's book will get the impression that Mill was confused upon this subject.

Professor Laughlin is mistaken when he says that gold has a "world value" (an expression which he frequently employs), and also when he says that under a system of free coinage the value of gold as money and as bullion is the same. In a scientific treatise such statements are inaccurate and out of place. Gold has almost as many different values as there are markets in the world. In this respect it is exactly like wheat, corn, cotton and other commodities which are subject to a world demand. Wheat is never exported to Europe from the United States except when its value is higher there than here. The same statement is true of corn and cotton and gold. It is inconceivable that a commodity should be exported under any other conditions. Furthermore, it is inconceivable that gold coin should ever be melted or exported as bullion were not its value as bullion greater than its value as money. It is impossible to explain why bullion should ever be converted into coin and retained in service as money were it not sometimes more valuable as money than as bullion. As money, the gold possesses a utility which it does not possess as bullion, namely, that of instantaneous and universal acceptability, just as corn in the form of meal possesses a utility which it does not possess in the raw state. Professor Laughlin's theory of money gives us no explanation of the fact of coinage. If money is not an independent entity possessing value for reasons peculiar to itself, a something as different from the material out of which it is made as bourbon whiskey or Boston brown-bread is from a Kansas cornfield, then the coinage of gold into money and its retention in that form are inexplicable. The fact that

the coinage of gold is gratuitous makes no difference. Suppose that the government should take over the property of the United States Steel Corporation, and that in order to encourage industry it should offer to convert into steel rails, free of charge, all the raw iron delivered to it. Under these conditions it is quite conceivable that the country's output of iron would first take the form of steel rails, but from that form it would pass into the countless other forms in which steel is serviceable to man. Would Professor Laughlin then hold that the value of steel rails was determined primarily by the value of iron, and was independent of the demand for and supply of steel rails? If an era of railroad construction should set in, unaccompanied by unusual activity in other forms of industry, would not the value of iron be greater in the form of steel rails than in any other form, and would not a smaller proportion of these freely coined rails be diverted to other uses? The utility of money is so unlike that of any other commodity that it is difficult to find analogies, but we have one here, I think, which runs parallel with the coinage of gold into money. Money possesses a distinct and peculiar utility, just as does the steel rail; it is freely manufactured by the government out of gold and so tends to have the same value as gold, just as steel rails would tend to have the same value as iron if freely manufactured by the government. The demand for money varies with the volume of exchanges that men wish to effect with money, and with the use of credit, which lessens the need for money for the consummation of a given volume of exchanges and increases its efficiency, just as does an increase in the rapidity of its circulation; and the value of money, or its exchange power, is entirely due to this demand, the value of each money unit being proportionate to the whole supply. In the same way, the demand for steel rails depends upon the volume of goods offered to railroads to be hauled and upon the growth of the country, and their value comes from this demand and is not a reflex of the value of iron; on the contrary, the raw iron gets its value in part from the demand for steel rails, and in part from the demand for other articles manufactured out of iron and steel. Steel rails do not derive their value from the value of the iron. It would be equally incorrect to say that money derives its value

from the gold out of which it is made; it is the value of gold which is derivative, being due in part to the demand for money and in part to the demand for ornaments, *etc.*

Mr. Mill did not go into all these details about the competition for gold constantly carried on between the arts and money. Nor did he stop to emphasize the fact that if money were not a real thing, having a value of its own like other commodities, no gold would be retained in use as money even though the government coined it gratuitously. He had probably read no such volume as this by Professor Laughlin, and it had not occurred to him that it was necessary to demonstrate the obvious. The student of Mill will find, however, that these propositions, tacitly assumed to be true, underlie his whole exposition of money and credit.

On page 279, Professor Laughlin is "considerably taken aback to find that the preceding exposition of the quantity theory was intended to apply only to market prices." Why should this be surprising? It is consistent with Mill's treatment of demand and supply throughout his book; market values depend on demand and supply; normal values tend to conform to the cost of production. Mill shows that money is no exception to the rule if it is made of gold freely coined; then, since the value of the coin can never differ greatly from the value of the bullion, the value of money in the long run will conform to the cost of production of gold. That is Mill's doctrine, and it is sound, but it involves no abandonment of the theory that the value of money is governed by demand and supply. Why does the value of gold, or of any other good, conform to cost? Because the self-interest of men, if free competition prevails, impels them so to regulate the supply that the value shall not vary widely from the cost. In the case of gold, the adjustment of its value to cost is a slow process, for the stock on hand is so great that any possible increase or diminution of the yearly output of mines can have only a slight effect on its value. We have nothing here, as Professor Laughlin implies, that is inconsistent with Mill's theory of money. To revert to steel rails, it is true to say that their value in the market depends upon the demand for them and their supply; it is also true that their value tends to

conform to the cost of production of iron. If the demand for steel rails greatly increases, there is an increase in the demand for iron and also in its value, so that it pays to work a poorer grade of iron mines. Does it follow that the value of steel rails does not depend on the demand for them and their supply, or that the value of iron is first determined and then the value of steel rails fixed in conformity therewith? Not at all. Iron owes a large share of its value to the demand for and value of steel rails. When money is made of gold freely coined, the relation of its value to the value of gold is the same as the relation of the value of steel rails to the value of iron. If steel rails were made freely by the government, an increase in the supply of iron would necessarily result in an increased supply of steel rails; but the new iron would not retain the form of steel rails unless the demand for rails gave them a value greater than the value of other articles made of steel (less cost of manufacture). Steel rails and iron would both fall in value, and if the value fell below the cost of production from the poorest mines, these would be abandoned and the supply of iron and steel rails would be gradually diminished, their value rising in consequence toward the level of cost. Here we have an ordinary instance of value determined by demand and supply in conformity with cost. If we substitute "gold" for "iron" (or steel) in the foregoing, and "money" for "steel rails," all the propositions will still be true. The cost of production of gold regulates the value of money in the same way that the cost of production of iron regulates the value of steel rails; but this is no abandonment of the theory that demand and supply determine the value both of steel rails and of money.

Mill's description of the part played by credit as a medium of exchange and as an instrument for the transfer of capital into productive ownership has always seemed to me one of the best expositions to be found in the literature of political economy. To estimate it fairly, one must bear in mind that Mill was writing, not a treatise on money and credit, but an analysis of the laws governing the production and distribution of wealth. His thought was primarily concerned with those utilities which contribute to the comfort and pleasure of men. Money and credit, which are mere instruments of exchange, not normally affecting the laws of

exchange or the real rewards of labor, he naturally regarded as secondary in importance, and was apparently content if his exposition should make clear their relation to things more fundamental. From his point of view, precise definitions and formal propositions, such as he laid down with elaborate analysis in the discussion of capital, were not called for in the case of money and credit. Hence we have no definitions and no well-rounded theory, formally supported by axiom and argument on all sides; yet the man who thinks while he reads will, in my opinion, be unable to get away from Mill's conclusions. Credit, he says, is purchasing power, and "in whatever shape given" it acts on prices like money. This is true. Under modern conditions there is no demand for goods except that which comes from men who offer money for them, either money on the spot or money in the future, *i.e.*, either money in hand or credit. Sellers usually prefer the credit to the money, as a safer and more convenient medium, since it does not require to be counted laboriously and without endorsement is often valueless to third parties. Why should such purchases not raise prices? The fact that they do seems too obvious to need proof. Yet Professor Laughlin holds that they do not affect prices because they do not affect the value of the standard. That, however, is exactly what credit does. It affects the value of the standard just as do changes in the rapidity of circulation; it increases the efficiency of money (the standard) as a medium of exchange, making a single dollar (the standard) capable of effecting several exchanges at the same moment. Our modern credit system practically enables four or five men at the same time to claim ownership of the same dollar lying in the vaults of a bank, and to transfer the ownership of it in the purchase of goods with precisely the same effect as if each handed over the dollar itself. This is Mill's theory of the relation of credit to money and prices, and I must say that Professor Laughlin does not seem to understand it, for he neither states it nor touches it in his criticism.

I will not take up Professor Laughlin's examination of the views of other economists who support the demand-and-supply theory of money. I must reproduce, however, a remarkable footnote at the bottom of page 287, written in comment on General

Walker's<sup>1</sup> theory with respect to the relation of barter and credit to prices. The note runs thus:

In such cases, it seems to me, the correct operation is this: The introduction of credit lessens the demand for gold as a medium of exchange; the world value of gold tends to fall; gold, as a commodity, falls in value relatively to other goods whose expenses of production have remained the same; then follows a necessary adjustment of prices to correspond to the change in relative values; the change in prices is a result of the change in the relative values of goods and gold. The change in prices, then, is not brought about through the means of an actual increase in the quantity of gold offered for goods.

This note is surprising because it comes so near the truth. Credit does lessen the demand for money and so does tend to raise prices. We might accept the entire note as being a true and fair statement of the operation if we did not feel certain that Professor Laughlin has in mind a mysterious and unexplained process when he says: "Then follows a necessary adjustment of prices to correspond to the change in relative values." How the value of gold can change before prices change, or how a change in the value of gold could be known to any one before prices had fallen, is a mystery.

Having finished his historical review of the quantity theory, Professor Laughlin devotes a chapter to the critical examination of it. He states the theory as follows on page 314:

The essence of the quantity theory is unquestionably this: (1) price-making can go on only through an actual exchange of "money" against goods; (2) and the level of prices is fixed by a comparison between the amount of exchanging to be effected (taking into account the number of times each commodity changes hands) and the quantity of "money" (however defined) in circulation (taking into account the rapidity of circulation). The only conditions under which the theory can be regarded as operative are the following:

The first two conditions under which the theory "can be regarded as operative" are: (1) a monopoly of the coinage, or of the

<sup>1</sup> The author states General Walker's views unfairly. For instance, he says (page 286) that Walker "boldly denies that cost of production operates in fixing prices," and that he "illogically rejects" credit as a medium of exchange

issues of paper money, by the central authority; (2) where money is the only instrument of exchange. Does Professor Laughlin mean to admit that the theory is true under these conditions? It would seem so, for he says on page 315:

What is true, given the hypothesis, is applied as true of the modern world of facts which are not included in the hypothesis. The transplantation of the "axiomatic principle" from its hypothetical soil to the conditions of actual life presents serious logical difficulties, and a necessity arises for stretching both the theory and the facts to meet the situation. This is the explanation, in my opinion, of the curious want of consensus in regard to what is "money" in the quantity theory, and to the variety of ways in which prices are supposed to be determined. The fact is, the fundamental assumption is false, and the wrong theory can never be made to fit the phenomena of price.

This is rather puzzling. If the theory would be true under a monopoly of the coinage, why does free coinage invalidate the theory, and what is that fundamental assumption which is false? "In the case of metals," he says, "no free coinage can be allowed; otherwise the coins would have the value of the bullion from which they are made." So the quantity theory would be true if coinage were restricted, but free coinage renders a new theory necessary because, forsooth, the value of the coin must conform to the value of the bullion. I have already exposed the fallacy underlying Professor Laughlin's idea that gold coin derives its value from the bullion.

The following paragraph (pages 315 and 316) illustrates Professor Laughlin's style of attack:

The central error of the quantity theory lies, in my judgment, in the assumed premise that prices are fixed by a comparison between the goods to be exchanged (*i.e.*, the money work) and the media of exchange by which the work is done. This practically amounts to saying that the force regulating the price is the price, or the amount of money, actually obtained, whatever that may be. What, for instance, regulates the price of wheat? Why, of course, the amount of the medium of exchange for which it is in fact exchanged. How much wood can a man chop? Why, great discovery! the wood that he chops! Such a process of price-making (speaking now of all goods

and of all the money in circulation) seems to be nothing more than comparing the goods with the outcome of the comparison; comparing the thing to be done with the thing done. It confuses the effect with the cause producing the effect. It gives us no clue to the causes affecting general prices. What fixes the prices of goods? Why, the prices which are fixed.

This paragraph strikes me as being puerile. When I first read it I supposed that the author must be indulging in humor or sarcasm, but the context forbids either saving supposition. How, indeed, can a man find out how much wood he can chop in a day? Shall he compare his biceps with the arm of a standard wood-chopper? Will Professor Laughlin tell us what fixes the value of wheat if it is not the quantity of other things that are offered for wheat? Has he found some way of arriving at value without the competition of buyer and seller? Apparently he has, for in the next paragraph he says:

The offer of a certain amount of a medium of exchange for goods merely records the result of the antecedent price-making process.

Now, the price-making process is a specific instance of the value-making process; it determines the value of a good with respect to money. Are goods valued with respect to money in an exceptional way, or are the values of all goods determined in the same way? Professor Laughlin's reasoning implies the former, but he nowhere describes the nature of the antecedent valuation process.

One of Professor Laughlin's fundamental errors is his assumption that credit is something radically different from money. I have referred to this before, but the assumption involves a misunderstanding which I have not yet noticed. The following sentences (pages 317 and 319) contain what I wish to comment upon:

Earlier writers gave no attention to the evolutionary process by which media of exchange, different from the standard commodity, have been brought into the commercial world. . . . For it is not even true that the price level changes according to the united quantity of "money" and credit.



We have here the assumption that credit is something different from money, or the standard of price. If Professor Laughlin's theory of credit were true, and credit were based on goods, then credit and money would be different things. But credit is not a contract to deliver goods, it is a contract to deliver money. In all buying and selling, money figures on one side of the transaction; sometimes the seller takes money on the spot, often he prefers a right to demand money in the future. But in both cash transactions and credit transactions, money is the thing with which the purchase is made. If a farmer, having no money in his possession, goes to a country store where he is known, and obtains flour, sugar and coffee, agreeing to deliver to the storekeeper six bushels of potatoes the next day, are not potatoes the thing with which he has bought those supplies? Undoubtedly. The fact that he did not deliver the potatoes at the time of the purchase makes no difference in the nature of the transaction. Nevertheless, it was a credit transaction. The credit part of it was not based upon goods of any kind — neither potatoes nor any other property the farmer possessed. It was based upon the storekeeper's belief that the farmer was an honest man who would keep his word. Nor would the nature of the transaction be changed if the farmer never delivered the potatoes to the storekeeper, but delivered them instead, by request of the storekeeper, to one of his other customers from whom he had received money or something else in payment. Cases of barter, or of such credit-barter as is assumed in this illustration, are so rare that they can be ignored. In the modern business world credit is not a medium of exchange different from money. Our banks and clearing-houses, our laws and our civilization, have made it possible for men having no money at all to buy goods by agreeing to give money in the future. So highly developed is this method of business, one purchase being frequently offset by another, that a small quantity of money suffices for the settlement of a large volume of transactions. Nevertheless, money is the one and only thing which serves as a medium of exchange. In all the so-called credit exchanges, even though money does not appear on the spot, it is the thing with which the buying is done. The relation of credit to prices, therefore, is simple enough:

it increases the efficiency of money; it increases the power of men to buy goods with a given quantity of money; it lessens the demand or need for money; and it must, therefore, lessen the value of money and so bring prices to a higher level than they would attain if all buying were done with money in hand.

Professor Laughlin is tilting at a windmill of his own construction when he attacks the quantity theory on the ground that since credit media of exchange are different from money, the defenders of the theory cannot legitimately hold that the value of money depends upon the quantity of the media of exchange. The value of money depends upon the demand for it and its supply. Credit, by increasing the efficiency of money, tends to lessen the demand for it, and so to lessen its value. That is what is incorrectly called the quantity theory of money; incorrectly, for that name puts improper emphasis on the supply, whereas changes in the demand are often more important. Professor Laughlin has not even jarred the foundations of this theory.

I can consider only one more of Professor Laughlin's theoretical objections to the quantity theory. I quote from page 321:

The bimetallic supporters of the quantity theory very strongly urged that the demand for gold in the arts and for jewelry and ornaments had increased the demand for gold, increased its value, and hence tended to lower gold prices. Whatever the statistical data may be worth, the principle on which their argument is based was valid; they were right in claiming that anything which affected the demand (or supply) of gold would, theoretically, have an influence on the value of the standard and hence on prices. Of course, it admits that other things than the quantity of money in circulation affect price, and is a tacit surrender of the quantity theory. The non-monetary demand for the money metal (*e.g.*, gold) is an essential part of the demand, and it can affect the value of gold and gold-prices in the same way that any other demand — such as a monetary demand — can.

This paragraph, read in connection with a paragraph on page 325, where he defines "demand for money," contains a tacit admission of the truth of the quantity theory. If there is such a thing as a demand for money, does not that demand give money a value of its own, a value entirely independent of its material? It will not do to say, as Professor Laughlin does, that the value

of our gold money is derived from the value of gold itself. Whence comes the value of gold? From the demand for it due to the fact that money has value, and from the demand for it due to the fact that gold ornaments have value. Ornaments have value because they satisfy certain human wants; money has value for no other reason. Gold is the material out of which men choose to make both, and its value is due to the demand derived from these dual uses. When the relation between the demand for and the supply of money gives to gold coins a value higher than that of the bullion they contain, more gold will be coined and retained in service as money; and, conversely, when the increasing demand for gold in the arts makes 258 grains of standard gold more valuable to the jeweller or the banker as bullion than as money, gold eagles will be either melted and converted into ornaments, or packed in kegs and shipped to foreign countries as so many ounces of gold. Professor Laughlin thinks the quantity theory disproved by the fact that an increase in the supply of gold must cause a fall in the value of gold money. He thinks that this is an admission "that other things than the quantity of money in circulation affect price, and is a tacit surrender of the quantity theory." On the contrary, it is a confirmation of the quantity theory. The new gold comes into circulation as money for the simple reason that it is not wanted in the arts at the existing level of prices, and it cannot raise prices until it has been coined and put into use as money. New gold raises prices only by increasing the quantity of money in circulation and in the reserves of banks. That it could act on prices in any other way is inconceivable.

"Lastly," says Professor Laughlin, "the quantity theory does not explain the facts." Then he goes on to say (page 327):

Taking the available data at hand for the United States, one would have no hesitation in saying that in no single case examined has there been any proportion whatever between the movements of prices and the quantity of the circulation. . . . It (the quantity theory) has had its origin in pure deduction, unconfirmed by statistical inquiry.

He then tests the theory by an examination of the movement of prices from 1860 to 1891, and by means of a diagram shows that

"there is no correspondence whatever between the quantity of the circulation and the level of prices." This familiar statistical test of the quantity theory, so called, should perhaps still be treated seriously and in detail, but I will leave that task for some one who has more patience with naked *non sequiturs* than I. Any man who thinks that Professor Laughlin proves or disproves anything by his statistics needs a thorough course in the elements of the theory of money; until he has had that, one might as well reason with an inverted umbrella. I cannot help calling attention to the fact, however, that Professor Laughlin does not understand the problem, as is shown by his conclusion that there has been "no proportion whatever between the movements of prices and the quantity of circulation." No sane man, believing in the demand-and-supply theory of money, would expect to find any such proportion. By "circulation," Professor Laughlin means the amount of "cash" in the country (under "cash" I include money — that is, coined gold — and all forms of credit having the same general acceptability as a medium of exchange). The "circulation," therefore, is part money and part credit, and it by no means includes the greater part of the credit instruments that are used. Evidently a comparison of price movements with changes in population and "circulation" during any given period must be absolutely bootless. The statistics for such an investigation as Professor Laughlin pretends to make have not been assembled, and it is doubtful if they ever can be. A diligent man, if he can only win the confidence of his readers by the eloquent utterance of safe and inspiring platitudes, can by the use of alleged statistics prove or disprove any proposition. Professor Laughlin is sarcastic about the quantity theory, so called, on the ground that it is pure deduction. So are the fundamental laws of physics, the law of gravitation and the theory of the solar system. If a man will only get up early enough in the morning during twenty years of his life and take the proper observations, he can get apparently incontrovertible statistical evidence that the sun rises in the east, and moves around and over the earth. Professor Laughlin should have respect for statistics of that kind, for his are of the same sort.

I find that I am playing the critic more than I had intended,

but Professor Laughlin's book is such a luxuriant bed of fallacies that I cannot get away from it. Just one more instance. On page 355, where he is trying to show how the prices of goods may fall, the value of money — *i.e.*, gold — being unchanged, he says:

Supposing the demand and supply of the money metal to be unchanged, an improvement which lowers the expenses of producing a given unit of one article, or of all articles, would necessarily affect the general level of prices, and show itself in a lower range of prices.

Notice the argument; the money metal is not to change in value, but general prices are to fall. And this, notwithstanding Professor Laughlin's acceptance of the orthodox definition of value, namely, the exchange power of goods!

Professor Laughlin's theory of money, so called, is seen at its worst in his chapter on Prices and the International Movement of Specie. Here we discover why he insists throughout his book that gold has a "world value." Since the value of gold is the same the world over, and the prices of goods conform to their expenses of production, the exports and imports of a country are determined by the relative expenses of production. When there is a difference in the value of exports and imports, gold is transmitted in settlement of the balance. If that is not the old mercantilist "balance of trade" theory, then I have not understood it.

Professor Scott's *Money and Banking* is a volume of 380 pages, and is less pretentious and dogmatic than Professor Laughlin's. There are, in fact, indications that the author has sat at the feet of Professor Laughlin, for his book presents practically the same theory of money, although the exposition is even more vague and unsatisfactory. Like Professor Laughlin, he does not define money, but makes the word include bank notes, silver certificates, greenbacks and subsidiary coins. Although his book is a treatise on money and banking, he presents no theory of credit whatever, and no discussion of the important relation of credit to prices. Like Professor Laughlin, he uses the words "currency" and "circulation" in the vaguest way, leaving the reader

uncertain whether he includes or excludes such credit instruments as checks and bills of exchange. There is no excuse for this loose use of terms. Money, if it is anything in the scientific sense, is the thing possessing universal acceptability or exchangeability. It is what Professors Laughlin and Scott insist upon calling the standard. All other forms of so-called money are credit instruments. Although those credit instruments which have general acceptability are popularly known as money, there is no reason for calling them such in a scientific treatise; they might be called money-credit or credit-money, and thus be clearly distinguished from money itself. The word "cash" as commonly used includes money and all forms of credit money, and there is no need for employing it in any other sense. The word "circulation" is practically synonymous with cash. I am not certain that Professors Laughlin and Scott have used these words as I have defined them, and I am not certain, therefore, that I understand all they have written.

Professor Scott's book, I regret to say, does not deserve much attention. Horace White's *Money and Banking* is unquestionably superior to Professor Scott's in its treatment of credit and banking, and will be justly preferred by readers and teachers. Professor Scott is seldom clear and definite. While his book presents in a hazy way the same theory of prices that we have found in Professor Laughlin's work, he makes no effort whatever to explain how prices are determined. He devotes a chapter to a criticism of the quantity theory of money, but his objections to it have all been sufficiently met in my discussion of Professor Laughlin's book. I will give a specimen of his argument taken from page 63:

That the total volume of the currency is an effect of which prices are one of the causes, is, as we have already remarked, axiomatic. It follows from the very nature of a medium of exchange. As a go-between in every trade, money must reflect prices, and there must be as many units as there are dollars' worth of value exchanged at one time. The number of dollars' worth of value exchanged, however, is determined by the number of times the value of the specific amount of gold or some other commodity, which we have agreed to call a dollar, is contained in the value of the commodities bought and sold upon

the markets, and not by the number of pieces of money which may chance to be somewhere stored away or capable of being manufactured. In other words, the money is manufactured for the exchanges, instead of the exchanges being effected for the purpose of using the money.

On the next page I find the following:

For example, there can be little doubt that, if various forms of bank currency were substituted for the English sovereigns and half-sovereigns, the French twenty- and ten-franc pieces, and the German twenty- and ten-mark pieces now in circulation, the value of gold would be affected, and with it prices. Such a substitution, however, would not necessarily involve any change in the total volume of the currencies of those countries.

Yet on page 61 he refers to "the axiom of monetary science that when prices are high a larger amount of money is needed to effect the exchange of a given number of commodities than when they are low." I am unable to understand how he can reconcile this "axiom" with his conclusion that no more money or cash would be needed in England if prices rose. According to Professor Scott, the demand for money depends upon prices. For instance, on page 67 he says: "The demand for currency is measured, not by the number of commodities to be exchanged at a given time, but by the number of each multiplied by its value or price." Yet on page 185 he declares that the demand for cash is unusually large during a panic. Now, during a panic the most notable phenomenon is the fall of prices. Professor Scott does not explain why a panic causes the suspension of his axiom.

His discussion of seigniorage illustrates the vagueness of his method. He takes up the subject on page 78 and states in a general way the views of various writers. One is curious to know what he himself will have to say about Ricardo's theory that uncoined seigniorage, no matter how great, does not affect prices. But he does not touch the question. Toward the end of his discussion of seigniorage he says: "In order properly to weigh these arguments a number of considerations are necessary which must be deferred to later chapters of this book." There may be more in the book about the subject, but I cannot find it.

Although his book is entitled *Money and Banking*, and gives

very general descriptions of the leading banking systems of the world, there is, as I have said, nothing about the nature of credit, and no discussion of the advantages of an elastic currency. The word "elasticity" occurs a few times, but he does not tell why elasticity is needed in the currency, nor what are the evils of a rigid currency. I searched also in Professor Laughlin's book for the familiar argument, for I knew him to be an advocate of an elastic bank-note currency and was curious to know how he could justify his position without damage to his theory that prices are antecedently determined by reference to a standard of value. I found nothing on the subject. Professor Scott certainly ought to have thrown some light on it in his book. If he intends to be consistent, he will be wise if he takes the position that elasticity in the currency is not necessary; for the argument upon which the demand for elasticity is based takes it for granted that an increasing demand for cash, if not satisfied, causes a rise in the rate of discount and a fall of prices, — phenomena which both Scott and Laughlin, it seems to me, must deny.

Professor Scott does not feel called upon to discard the classical theory with regard to the international movements of specie. He does not advance the proposition that gold has a world value. An increased output from gold mines, he says, tends to raise all prices by lowering the value of the standard. "This effect is first felt in the country in which the mines are situated, since the new metal finds its way first to the local markets." If the rate of exchange, as the result of increased imports, rises beyond the export point, gold will leave the country. "Its price on the local bullion markets will correspondingly rise and the disturbed equilibrium of prices be thus restored." This would be sound enough if it did not imply that gold has different prices in the bullion market. Does he mean that any banker or dealer in bullion is ever willing to pay over ten dollars for 258 grains of standard gold, or that an eagle will ever sell for less than that? Professor Scott should have explained to his readers how the "prices" of gold on the bullion markets are determined.

Neither Professor Scott nor Professor Laughlin is able to explain the fact of fiat money, *i.e.*, money the value of which does not conform to the value of the material out of which it is made,



free coinage not being permitted. Professor Laughlin, to be sure, admits the possibility of fiat money when he implies that the so-called quantity theory is true if the government has a monopoly of the coinage, but he does not explain the necessity for such admission. Both he and Professor Scott hold that depreciated paper money, such as the greenback during the Civil War, owes its value to constant reference to the standard, a fall in its value being a result of increasing doubt as to its ultimate redemption. Professor Scott holds that during the greenback era this country had two standards, — a primary standard (gold), and a secondary standard (greenbacks), — and that people quoted prices of articles in two standards. As a matter of fact, this practice was never general even during the uncertain years of the war; after 1865 practically all prices (except on the Pacific coast) were in greenbacks, and men in pricing goods gave little thought to the relation of gold to greenbacks. If doubt about the ultimate redemption of paper money is the only cause of its depreciation, how can Professors Scott and Laughlin account for the depreciation of the notes of the Bank of England during the "restriction period"? Gold was then quoted at a premium of 16 per cent, yet the majority of English business men, and people in general, stoutly protested against the resumption of specie payments, holding that the notes of the Bank of England were better than gold. No one had the slightest doubt about the solvency of the Bank of England. There was universal confidence in it. The bullion committee, however, decided that the notes had depreciated because of excessive issues, and gave very good reasons in support of their opinion. I am at a loss to see how Professors Scott and Laughlin can explain the interesting movement of prices in England between 1800 and 1810 without abandoning their theory of money.

To sum up, the peculiar theory of prices put forth by Professors Laughlin and Scott fails to explain the phenomenon of price, for the value-making process which is claimed to be antecedent to price-making is mythical and inconceivable; it fails to explain the international movements of gold; it fails to explain the value of fiat money or of depreciated paper money when used by a people

who have entire confidence in its goodness; it fails to explain the fact that seigniorage raises the value of coins above that of the metal they contain; it fails to explain the fact that speculative and wholesale prices are weak in New York when the country makes its autumnal draft upon that city's cash reserves; it fails to explain the fact that when this country's supply of money or cash is increased arbitrarily, as by an excess of government expenditures, the bank rate of discount is lowered, prices here and there lifted, and gold exported. All these phenomena the demand-and-supply theory of money explains as clearly as the theory of gravitation explains the phenomena of the solar system.

If the demand-and-supply theory of money is as clear and satisfactory as I have declared, how shall we account for the fact that two very intelligent, industrious, conscientious and successful teachers of political economy should find it fallacious? That question is psycho-sociological in character, and any answer I may suggest must be tentative. My own explanation is that this new theory of prices is a posthumous product of the silver scare of 1896. The authors, especially Professor Laughlin, were strenuous defenders of the gold standard in that memorable campaign, and doubtless were much annoyed by the adroit references of the enemy to the writings of Locke, Hume, Ricardo and Mill. The friends of silver, as can easily be shown, made fallacious use of the so-called quantity theory. They assumed, for example, that the demand for money was practically infinite, and would raise the value of silver to any desired height if that metal were freely coined into money. During the campaign, however, their arguments were very effective, and it is not surprising that they made converts. Many a financial heresy, like Professor Laughlin's new theory of prices, has had its origin in the exigencies of politics. The rigid bank-note system of England, for instance, which cannot perform any valuable service to the country, is the indirect product of the Restriction Act of 1797. That act gave England fiat money and taught the country bankers of England to regard the Bank of England note as being identical with money; so they used it as a reserve for the redemption of their own notes, England thus getting one credit system based upon another. The Restriction period also convinced country

bankers that redemption was of little consequence. In that country, as in the United States at that time, although no economist had sanctioned the idea, business men and bankers quite commonly believed in Professor Laughlin's theory that credit is based upon property, and that redemption in money is an unnecessary imposition upon the banker. The false ideas then prevalent about money and bank notes led to speculation, inflation and panic. In England, Peel's Bank Act of 1844, and in this country the Independent Treasury Act of 1846, were the results of bad banking practices imposed upon bankers by politicians. It would be a pity if the great debate over the standards should impose on the world for any length of time a theory of prices so barren and unreal as that expounded in the books under review.

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